

## Patterns in Fish Diversity and Abundance of an Abandoned Gold Mine Reservoirs

**Authors :** O. E. Obayemi, M. A. Ayoade, O. O. Komolafe

**Abstract :** Fish survey was carried out for an annual cycle covering both rainy and dry seasons using cast nets, gill nets and traps at two different reservoirs. The objective was to examine the fish assemblages of the reservoirs and provide more additional information on the reservoir. The fish species in the reservoirs comprised of twelve species of six families. The results of the study also showed that five species of fish were caught in reservoir five while ten fish species were captured in reservoir six. Species such as *Malapterurus electricus*, *Ctenopoma kingsleyae*, *Mormyrus rume*, *Parachanna obscura*, *Sarotherodon galilaeus*, *Tilapia mariae*, *C. guntheri*, *Clarias macromystax*, *Coptodon zillii* and *Clarias gariepinus* were caught during the sampling period. There was a significant difference ( $p=0.014$ ,  $t = 1.711$ ) in the abundance of fish species in the two reservoirs. Seasonally, reservoirs five ( $p=0.221$ ,  $t = 1.859$ ) and six ( $p=0.453$ ,  $t = 1.734$ ) showed there was no significant difference in their fish populations. Also, despite being impacted with gold mining the diversity indices were high when compared to less disturbed waterbodies. The study concluded that the environments recorded low abundant fish species which suggests the influence of mining on the abundance and diversity of fish species.

**Keywords :** Igun, fish, Shannon-Wiener Index, Simpson index, Pielou index

**Conference Title :** ICEB 2024 : International Conference on Ecosystems and Biodiversity

**Conference Location :** New York, United States

**Conference Dates :** January 29-30, 2024